

SDP PHASE 1 SCREENING WORKSHEET FOR IE, MS, and B CORNERSTONES

Reference/Title (LER #, Inspection Report #, etc): 2000-10

Factual Description of Identified Condition (statement of facts known about the finding, without hypothetical failures included):

ON FEBRUARY 15, 2000 A SGT L occurred of IP2 due to PWSCC in the APGX of a Row 2 tube (R2C5). The NRC has determined that a number of Performance Issues during a 1997 SG tube inspection were the root cause for this Event.

System(s) affected by identified condition: RCS boundary

Train(s) affected by identified condition: N/A

Licensing Basis Function of System(s) or Train(s) (as applicable):

Other Safety Function of System(s) or Train(s) (as applicable):

Maintenance Rule category (check one): N/A risk-significant non-risk-significant

Time that identified condition existed or is assumed to have existed:

C/37

INITIATING EVENT CORNERSTONE

Transient initiator contributor (e.g., reactor/turbine trip, loss offsite power)

Primary or Secondary system LOCA initiator contributor (e.g., RCS or main steam/feedwater pipe degradations and leaks)

MITIGATION SYSTEMS CORNERSTONE

BARRIERS CORNERSTONE

Core Decay Heat Removal Degraded

RCS LOCA Mitigation Boundary Degraded (e.g., PORV block valve, PTS issue)

Initial Injection Heat Removal Degraded

Primary (e.g., Safety Inj) Containment Barrier Degraded

Low Pressure Reactor Containment Degraded

High Pressure Actual Breach or Bypass

Secondary - PWR only (e.g., AFW) Heat Removal, Hydrogen or Pressure Control Degraded

Long Term Heat Removal Degraded (e.g., ECCS sump recirculation, suppression pool

Control Room, Aux Bldg, or Spent cooling)

Fuel Bldg Barrier Degraded

Reactivity Control Degraded

Fuel Cladding Barrier Degraded

Fire/Flood/Seismic/Weather Protection Degraded

SDP PHASE 1 SCREENING WORKSHEET FOR IE, MS, and B CORNERSTONES

Check the appropriate boxes ✓

If the finding is assumed to affect:

1. fire barrier or suppression features, use IMC 0609 Appendix F
2. the safety of a shutdown reactor, use IMC 0609 Appendix G
3. the safety of an operating reactor, identify the affected areas:

Initiating Event Mitigation Systems RCS Barrier Fuel Barrier

Containment Barriers

4. None of the above areas affected → screen as Green

5. Two or more of the above areas affected → Go to Phase 2

6. If only one of the above areas is affected, continue only in the appropriate column below.

Table 2.7 SDP Worksheet for Indian Point Unit 2 Nuclear Plant — SGTR

Estimated Frequency (Table 1 Row) I Exposure Time > 30 DAYS Table 1 Result (circle): (A) B C D E F G H

<u>Circle Affected Functions</u>	<u>Recovery of Failed Train</u>	<u>Remaining Mitigation Capability Rating for Each Affected Sequence</u>	<u>Sequence Color</u>
1 SGTR - EQ - SDC (3, 7, 13)		$1 (EQ) + 3 (SDC) = 4$	YELLOW
2 SGTR - EQ - MKRWST (4, 14)		$1 (EQ) + 2 (MKRWST) = 3$	<u>(RED)</u>
3 SGTR - EIHP - EQ - RAPDEP (8)		$3 (EIHP) + 1 (EQ) + 1 (RAPDEP) = 5$	WHITE
4 SGTR - AFW - HPR (10)		$3 + 1 (AFW) + 2 (HPR) = 6$	GREEN
5 SGTR - AFW - FB (11, 15)		$3 + 1 (AFW) + 2 (FB) = 6$	GREEN
6 SGTR - AFW - EIHP (16)		$3 + 1 (AFW) + 3 (EIHP) = 7$	GREEN

Identify any operator recovery actions that are credited to directly restore the degraded equipment or initiating event:

If operator actions are required to credit placing mitigation equipment in service or for recovery actions, such credit should be given only if the following criteria are met: 1) sufficient time is available to implement these actions, 2) environmental conditions allow access where needed, 3) procedures exist, 4) training is conducted on the existing procedures under conditions similar to the scenario assumed, and 5) any equipment needed to complete these actions is available and ready for use.

Safety Functions Needed:

- Secondary Heat Removal (AFW)
- Early Inventory, HP Injection (EIHP)
- Primary/Secondary pressure Equalization (EQ)
- Rapid Depressurization (RAPDEP)
- Primary Heat Removal, Feed/Bleed (FB)
- High Pressure Recirculation (HPR)
- Makeup RWST (MKRWST)
- RHR in shutdown cooling mode (SDC)

Full Creditable Mitigation Capability for each Safety Function:

- 1 / 2 MDAFW trains (1 multi-train system) or 1 TDAFW train (1 ASD train)
- 1 / 3 HPI pumps (1 multi-train system)
- Operator isolates the ruptured SG and depressurizes RCS to less than setpoint of safety valves of SG (operator action under high stress)⁽¹⁾
- Operator depressurizes rapidly using 3 / 3 SG ARV with 2 / 3 AFW trains (operator action under high stress)⁽²⁾
- 2 / 2 PORVs open for Feed/Bleed (operator action)
- 1 / 3 HPI pumps with (1 / 2 LPIS pumps or 1 / 2 RSS pumps) with switchover to recirculation (operator action)
- Operator aligns primary water storage tank to RWST (operator action)
- 1 / 2 RHR pumps in shutdown cooling mode (1 multi-train system)